

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER
		U.S. APPLICATION NO. (If known, see 37 CFR 1.5)
INTERNATIONAL APPLICATION NO. <i>PCT/CA 2003/001312</i>	INTERNATIONAL FILING DATE <i>29 August 2003</i>	PRIORITY DATE CLAIMED
TITLE OF INVENTION <i>System of super super decoupled load flow computation for Elect. Power System</i>		
APPLICANT(S) FOR DO/EO/US <i>Sureshchandra B. Patel</i>		

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

- ☐ This is a **FIRST** submission of items concerning a submission under 35 U.S.C. 371.
- ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a submission under 35 U.S.C. 371.
- ☐ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
- ☒ The US has been elected (Article 31).
- ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - ☐ is attached hereto (required only if not communicated by the International Bureau).
 - ☒ has been communicated by the International Bureau.
 - ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
- ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - ☐ is attached hereto.
 - ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
- ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - ☐ are attached hereto (required only if not communicated by the International Bureau).
 - ☒ have been communicated by the International Bureau.
 - ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - ☐ have not been made and will not be made.
- ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
- ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
- ☐ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 20 below concern document(s) or information included:

- ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
- ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
- ☒ A preliminary amendment.
- ☐ An Application Data Sheet under 37 CFR 1.76.
- ☐ A substitute specification.
- ☐ A power of attorney and/or change of address letter.
- ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.
- ☐ A second copy of the published International Application under 35 U.S.C. 154(d)(4).
- ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)		INTERNATIONAL APPLICATION NO. PCT/CA2003/001312		ATTORNEY'S DOCKET NUMBER	
20. Other items or information: I believe there is no multiple dependent claim. If however, USPTO considers there is any additional \$180 may be charged to my credit card.					
The following fees have been submitted				CALCULATIONS PTO USE ONLY	
21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.492(a))..... \$300				\$ 300	
22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c))				\$ 200	
If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... \$0					
All other situations..... \$200					
23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.492(b))				\$ 400	
If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... \$0					
Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... \$100					
International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB..... \$400					
All other situations..... \$500					
TOTAL OF 21, 22 and 23 =				900	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE		
- 100 =	/50 =		x \$250	\$	
Surcharge of \$130.00 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total claims	- 20 =		x \$ 50	\$	
Independent claims	- 3 =		x \$200	\$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360	\$	
TOTAL OF ABOVE CALCULATIONS =				\$	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.				450	
SUBTOTAL =				\$ 450	
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).				+	
TOTAL NATIONAL FEE =				\$ 450	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				+	
TOTAL FEES ENCLOSED =				\$ 450	
				Amount to be refunded:	\$ 000
				Amount to be charged	\$ 450

PTO-1390 (Rev. 07-2005)

Approved for use through 3/31/2007. OMB 0651-0021

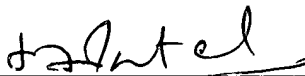
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

- a. ☐ A check in the amount of \$ _____ to cover the above fees is enclosed.
- b. ☐ Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees.
A duplicate copy of this sheet is enclosed.
- c. ☐ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. _____. A duplicate copy of this sheet is enclosed.
- d. ☒ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:


SIGNATURESureshchandra B. Patel
NAMEInventor
REGISTRATION NUMBER

Suresh Patel

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February 23, 2006

Commissioner of Patents
Mail Stop PCT
P.O. Box 1450
Alexandria, VA 22313 - 1450
USA

Subject: Entry into US-national-phase and the first Amendment of patent application No. PCT/CA2003/001312

Ref: **PCT/CA2003/001312:** System of Super Super Decoupled Loadflow Computation for Electrical Power System

Dear Sir/Madam,

Enclosed please find:

1. Amended copy of description, claims, abstract, and 7-figures of my application no. PCT/CA2003/001312 (51-pages)
2. A marked-up in red ink copy of contents of item-1 above for amendment against as filed and published contents of the application PCT/CA2003/001312 (26-pages with content on both sides)
3. Filled and signed: Recordation form cover sheet (form PTO-1595), Transmittal letter to the United States (PTO-1390), Credit Card Payment Form (PTO-2038), Declaration for Utility or Design Patent Applications (PTO/SB/01), and Correspondence address indication form (PTO/SB/81) (8-pages)

Claim-1 is the elaborate method of control in power network shown by Fig.5 involving a step of Loadflow calculation, which is proposed to embody inventions characterized in claims- 1 & 2. In claim-1, restricting rotation angle, using network shunts, and calculating modified real power mismatch steps are inventive. Claims-3 to 9 presents simple practical system and method described in detail that embody inventions of claims-1 & 2, establishing the practical utility of inventions. The practical system and method presented in claims-3 to 9 is similar to the one used to claim utility of the invention in US patent number 5081591 dated January 14, 1992: "Optimizing reactive power Distribution in an Industrial Power Network". Thus claims 1 to 9 follows and combines the method of claiming in the US patent 4868410 & US patent 5081591. **However, if a method patent can be granted as in the case of US patent 4868410, it is proposed to remove claims-3 to -9, corresponding description, and Figs.6 and 7 from the application. I expect examiner to advise on this.**

As filed claim-2 is merged into amended claim-1 as a step of "calculating modified real power mismatch as...". Other two steps of "forming and storing factorized gain matrices..." and " using

network shunt parameter...” are added, and “initiating...” and “restricting...” steps are relocated, and others are expanded and elaborated for clarity in the amended claim-1.

In amended claims-1 and -2, most general equations are used to claim inventions in their all possible variations described in description, and to avoid ambiguously described claims.

As filed claims-4, -5, and -6 becomes calims-3, -4, and -5 with relevant descriptive changes in the amendment. As filed claims-7, and -8 are combined as claim-6 in the amendment. And as filed claims-9, -10, and -11 becomes calims-7, -8, and -9 with relevant descriptive changes in the amendment.

Description is also modified appropriately to match with the claims. Most of the text placed between parentheses in the copy as filed is appropriately modified to remove parentheses, all the words ‘computation’ and ‘relations’ are replaced by the words ‘calculation’ and ‘equations’ in the amended copy. A step-1 is added in the Fig.1, Fig.2, Fig.3, and Fig.4 and the corresponding description and the next 2-steps are renamed as step-m and step-n. Step-n is also expanded and modified to be more specific. Steps-1, m, and n are the prior art steps and not inventive steps. Therefore, they are the same in all the first 4-figures and relevant description.

For better description of **SSDL-YY** model (page-13 in description as filed), equation (33) is expanded into equations (33) and (34), and 2-more, obvious from description, equations (35) and (36) are added in the amended copy similar to those of equations (9) and (10) in the description as filed.

In the model **SSDL-BGX**’ (page-20 in description as filed), one alternative to equation (71) is added, which derive influence from equation (85) (page-24 in description as filed). This amendment adds two equations after equation (71) as filed, as equations (75) and (76) in amendment copy, and one after (74) as filed, as equation (80) in amendment copy, which is the same equation (91) in as filed copy. Equations (71) and (74) are on page-20 and equation (91) on page-24 of the description as filed.

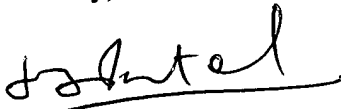
The better presentation changes in the models **SSDL-YY** and **SSDL-BGX**’ as stated in the above causes increase in 3-equations after (33) thereby equations (34) to (71) in description as filed becomes equations (37) to (74) in the amended copy of the description. Equation (91) on page-24 in the description as filed becomes equation (80) on page-30 in the amendment copy. Similar changes are effected in models **SSDL-BGY** and **SSDL-BGX** in the description as filed. Finally, equations (89), (90) and (91) on page-24 in the description as filed, are deleted and referred back to equations (78), (79), and (80) on page-30 in the amended copy of the description. Equation (98) is added corresponding to equation (49) in amendment, which is as filed equation (46). Also one equation (106) defining transformed diagonal element of the admittance matrix in amendment is added after as filed equation (101). Thus the total number of equations increased by five to total (108) in the amended copy of the description.

The description of Step-10 to Step-70 on page-3 in the copy as filed is elaborated and expanded for better understanding in the amended copy on pages-2 and -3.

Para [021] to [029] under the heading "SUMMARY OF INVENTION" in this amendment replaces as filed content on pages-5 & -6 under the heading "Disclosure of the Invention". Para [037] to [056] under the heading 'DESCRIPTION OF A PREFERRED EMBODIMENT' are added new for clarity that support claims, without adding any new description of claimed new invention. For more clarity of the amendment, marked-up copy should be referred. **Equation numbers in the application copy as filed are changed in this amendment copy because of expansion and reorganization of equations without adding anything which was not present in the application copy as filed.**

I have made this application as individual, and therefore, I claim status of small entity. Payment fees for charging to my credit card account are calculated for small entity.

Sincerely,

A handwritten signature in black ink, appearing to read 'Suresh Patel', with a horizontal line drawn underneath the signature.

Suresh Patel

Enclosures: Clean amended copy of description, claims, abstract, and 7-figures of application (51-pages) + marked-up in red ink copy of description, claims, abstract, and 7-figures with content on both sides (26-pages) + USPTO forms filled and signed (8-pages) + this cover letter (3-pages) = total 88-pages.